

## **Amendments to the Specification**

**Please replace the paragraph beginning on page 2, line 8 with the following amended paragraph:**

The first in line was a factor called brain-derived neurotrophic factor (BDNF) SEQ ID NO: 42, now also referred to as neurotrophin-2 (NT-2) which was cloned and sequenced by Leibrock, J. et al. (Nature 341, 149-152 [1989]). This factor was originally purified from pig brain (Barde, Y. A. et al., EMBO J. 1, 549-553 [1982]), but it was not until its cDNA was cloned and sequenced that its homology with NGF became apparent. The overall amino acid sequence identity between NGF and BDNF (NT-2) is about 50%. In view of this finding, Leibrock et al. speculated that there was no reason to think that BDNF and NGF should be the only members of a family of neurotrophic factors having in common structural and functional characteristics.

**Please replace the paragraph beginning on page 2, line 21 with the following amended paragraph:**

Indeed, further neurotrophic factors closely related to  $\beta$ -NGF and BDNF have since been discovered. Several groups identified a neurotrophic factor originally called neuronal factor (NF), and now referred to as neurotrophin-3 (NT-3) SEQ ID NO: 43 (Ernfors et al., Proc. Natl. Acad. Sci. USA 87, 5454-5458 (1990); Hohn et al., Nature 344, 339 [1990]; Maisonpierre et al., Science 247, 1446 [1990]; Rosenthal et al., Neuron 4, 767 [1990]; Jones and Reichardt, Proc. Natl. Acad. Sci. USA 87, 8060-8064 (1990); Kaisho et al., FEBS Lett. 266, 187 [1990]; copending U.S. application Ser. No. 07/494,024 filed Mar. 15, 1990). NT-3 shares about 50% of its amino acids with both  $\beta$ -NGF and BDNF (NT-2). Neurotrophins-4 and -5 (NT-4 (SEQ ID NO: 44) and NT-5), have been recently added to the family (copending U.S. application Ser. No. 07/587,707 filed Sep. 25, 1990; Hallbook, F. et al., Neuron 6, 845-858 [1991]; Berkmeier, L. R. et al., Neuron 7, 857-866 [1991]; Ip et al., Proc. Natl. Acad. Sci USA 89, 3060-3064 [1992]). The mammalian molecule initially described by Berkmeier et al. *supra*, which was subsequently seen to be the homolog of Xenopus NT-4, is usually referred to as NT-4/5 (SEQ ID NO: 45).

**Please amend the specification by inserting the amended Sequence Listing after the Abstract on page 120 in place of the previous Sequence Listing.**

## Amendments to the Sequence Listing

Enclosed is an amended Sequence Listing including SEQ ID NO: 42, SEQ ID NO: 43, SEQ ID NO: 44, and SEQ ID NO: 45. Please replace the Sequence Listing in this application with the enclosed amended Sequence Listing.

The following are the additional sequences added to the previously filed sequence listing:

### **SEQ ID NO: 42 (BDNF)**

MTILFLTMVISYFGCMKAAPMKEANIRGQGLAYPGVRTHGTLESVNGPKAGSRGLTSADTFEHMIEELLDEDQKV  
RPNNEENNKDADLYTSRVMLSSQVPLEPPLLFLLEEYKNYLDAANMSMRVRRHSDPARRGELSVCDISI  
SEWVTAADKK  
TAVDMMSGGTVTVLEKVPVSKGQLKQYFYETKCNPMGYTKEGCRGIDKRHWNSQCRTTQSYVRALTMDSKKRIGWRFI  
RIDTSCVCTLTIKRGR

### **SEQ ID NO: 43 (NT-3)**

msilfyviflaylrgiqggnmdqrs1pedslnsliikliqadilknklskqmvdvkenyqst1pkaea  
prepeqgea  
trsefqpmiatdtellrqqrnynsprvllsdstpleppplylmedyvgnpvtnrtsprrkryaehksh  
rgeysvc  
seslwvtdkssaidirghqvtvlgeiktgnspvkqyfyetrckearpvkngcrgiddkhwnsqcktsq  
tyvraltse  
nnklvgwrwiridtscvcalsrkigrt

### **SEQ ID NO: 44 (NT-4)**

mlplpscs1pillfllpsvpiesqpppst1ppflapewdllsprvvlsgapagpp1flleagafresagapanr  
srrgvsetapasrrgelavcdavsgwtdrrtavdlrgrevevlgevpaggsplrqyffetrckadnaeeggpgag  
ggcrgvdrrhwvseckakqsyvraltadaqgrvgwrwiridtacvctllsrtgra

### **SEQ ID NO: 45 (NT-4/5)**

mlplpscs1pillfllpsvpiesqpppst1ppflapewdllsprvvlsgapagpp1flleagafresagapanr  
srrgvsetapasrrgelavcdavsgwtdrrtavdlrgrevevlgevpaggsplrqyffetrckadnaeeggpgag  
ggcrgvdrrhwvseckakqsyvraltadaqgrvgwrwiridtacvctllsrtgra